PLANT GENOME RESEARCH PROGRAM
COLLABORATIVE RESEARCH AND INFRASTRUCTURE PROJECTS

Program Announcement

NATIONAL SCIENCE FOUNDATION
DIRECTORATE FOR BIOLOGICAL SCIENCES

Deadline: **December 4, 1998 (letter of intent)**

January 29, 1999 (full proposal)

PROGRAM ANNOUNCEMENT
NATIONAL SCIENCE FOUNDATION
PLANT GENOME RESEARCH PROGRAM
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The National Science Foundation (NSF) announces the second competition for funds to support basic research in plant genomics. The goals of this program are to support research on the structure, organization, and function of plant genomes and to accelerate the acquisition and utilization of new knowledge and innovative approaches to elucidate fundamental biological processes in plants. Continued research in plant genomics is needed to facilitate the development of improved plants of economic importance, the design of novel plant products**,** and the elucidation of cellular processes common to all multicellular organisms.

I. BACKGROUND

The advent of genomics and bioinformatics has created a revolution that is changing the field of plant biology. In recognition of the enormous potential for technological advances related to this emerging discipline of plant sciences, the National Science and Technology Council initiated a National Plant Genome Research Program in 1997, and NSF subsequently established the Plant Genome Research Program within the Directorate for Biological Sciences. This Program held two separate competitions during the first year: (1) collaborative research and infrastructure projects (see NSF 98-30), and (2) *Arabidopsis* genome sequencing projects (see NSF 98-52). This program announcement continues the effort begun last year and provides information for submitting collaborative research and infrastructure proposals in plant genomics. No new competition is planned for *Arabidopsis* genome sequencing activities.

II. PROGRAM DESCRIPTION

The Plant Genome Research Program supports projects that make significant contributions to our understanding of plant genome structure and function. Emphasis is placed on plants of economic importance and appropriate model systems that link genome information to function at the cellular, organismal or evolutionary levels. This program is distinct from other NSF programs that support plant genome research as part of their program activities. High-throughput, genome-wide approaches to plant genome research that build upon recent advances in genomics, bioinformatics, and plant biology are strongly encouraged in this program. Proposals that deal with individual genes or gene families should be sent to other programs in the Directorate for Biological Sciences (consult BIO WebPages – http://www.nsf.gov/bio/.

NSF encourages new and innovative ideas and approaches to advance the science of plant genomics. All qualified projects will be considered as long as they meet the intent and goals of this announcement. A list of FY98 awards and abstracts made under NSF 98-30 can be found at http://www.nsf.gov/bio/pubs/awards/genome98.htm.This information should be consulted to ascertain the breadth of projects presently being supported. New proposals should build upon recent advances in plant biology and the analysis of model eukaryotic genomes.

Given the logistical complexity of large-scale research efforts in plant genomics, it is anticipated that most projects will involve multiple investigators, including those from disciplines outside of biology. Many projects will also involve multi-institutional networks organized as "virtual centers" or "centers without walls." NSF expects applicants to organize each project in a cost-effective manner that optimizes rapid progress, efficient use of resources, appropriate storage and dissemination of information, and effective integration of new advances in bioinformatics and instrumentation.

Other Considerations:

In addition to the primary scientific goals of the Program, applicants should consider the issues listed below:

- Activities supported by this Program should provide an ideal environment for training young scientists in modern research technologies, introducing them to new paradigms in plant biology, and promoting increased participation by members of under-represented groups. All proposals are expected to integrate research and education, and must include a well designed plan to increase participation of members of under-represented groups.
- International networks of research scientists exist for many plant species of economic importance. When applicable, proposed research activities should be coordinated with these networks to maximize efficiency and avoid unnecessary duplication of effort. Primary support of foreign participants and activities must be secured through other national programs.
- Proposals may include a community service component such as a multi-user facility for the analysis and distribution of biological materials. In such cases, the facility must be justified in terms of potential demand, efficiency, and cost-effectiveness. However, plans for continued operation of such a facility beyond the initial award period should not assume long-term NSF support.
- Private industry has already made a significant investment in plant genomic research. Innovative collaborations with industry are encouraged when they advance the goals of the Plant Genome Research Program. All proposals, including those with industry involvement, must include a clear explanation of how the ownership and public release of information and research materials will be handled.
- Principal investigators must agree to complete and open sharing of data in a timely manner. By submitting a proposal to NSF, it is understood that the submitting institution and all participants agree to guidelines set forth in the NSF *Grant Proposal Guide (GPG)* NSF 99-2, Chapter VII, Section H). The *GPG* document is available at: http://www.nsf.gov/cgi-bin/getpub?nsf992/.

III. ELIGIBILITY

Proposals are invited from U.S. academic institutions, U.S. non-profit research institutions, and consortia of such institutions with appropriate research and educational facilities (see *GPG*, Chapter I, Section D). When consortia of eligible individuals or institutions submit a proposal, a

single principal investigator must be designated as the project director and a single institution must accept overall management responsibility.

IV. AWARD INFORMATION

It is anticipated that approximately $20 million will be available in FY 1999, pending availability of funds, for proposals funded through this announcement. Projects will be supported at award levels ranging up to $3 million per year for one to five years. Funds for facility construction or renovation may not be requested. Simultaneous submission of proposals to this program and another federal agency is permissible only with prior written approval of the agencies involved.

Funding decisions are expected to be made by the end of July 1999 with awards expected to start in August 1999. Awards will be made either as grants or cooperative agreements.

V. INSTRUCTIONS FOR PROPOSAL SUBMISSION

Inquiries: Potential applicants are strongly encouraged to contact the Plant Genome Research Program for additional details prior to proposal preparation. Inquiries should be directed to Dr. David Meinke, Program Director, at (703) 306-1470 (phone), (703) 306-0339 (FAX), or dbipgr@nsf.gov (e-mail).

Letter of Intent: Applicants are encouraged to submit a letter of intent before submitting a full proposal. This letter should consist of three parts: (1) a descriptive title of the proposed project; (2) names and roles of the principal investigator and other senior personnel (Co-PIs and Collaborators) along with their institutions; and (3) a brief statement of scientific approaches and objectives (500 words or less). This information will not be distributed for peer review but will assist NSF staff in planning the review process. See "Proposal Due Dates" section of this Program Announcement for specific mailing instructions.

A. Proposal Preparation Instructions

Proposals must be submitted by FastLane (see "FastLane Submission" section below) and must follow guidelines described in the *GPG* (NSF 99-2). The following exceptions and additions apply to proposals submitted to this Program:

- **Proposal Cover Sheet (NSF Form 1207):** In the NSF FastLane system follow instructions on proposal preparation. When completing the Cover Sheet click on the "Add Org Unit" button. Highlight "DIRECT FOR BIOLOGICAL SCIENCES" and click "OK." Highlight "PLANT GENOME RESEARCH PROJECT" and click "OK." Clicking "OK" designates this program as the NSF organizational unit of consideration.

  Multi-institutional proposals must identify a lead institution and must be submitted as a single proposal. Only the lead institution should submit the proposal cover sheet (NSF Form 1207) via FastLane. The signed original Form 1207 should be sent to the Plant Genome Research Program as instructed below. Senior investigators from the other institutions involved in a

multi-institutional proposal should submit an original copy of signed NSF Form 1207 along with the signed original from the lead institution within a week of proposal submission via FastLane. Refer to this announcement (NSF **99-13**) on the cover sheet. See "Proposal Due Dates" section of this Program Announcement for specific mailing instructions.

Project Summary: The project summary should consist of two parts: (1) a list of senior personnel (PI, Co-PIs, collaborators) along with home institutions; and (2) a summary of the proposed project in 500 words or less.

Project Description (maximum 20 pages): The following additional items should be addressed in the project description:

- **Relevance:** Briefly explain the relevance of the proposed research to crop species and other plants of economic importance.
- **Informatics:** Include a detailed description of all informatics components of the project. This section should describe the informatics tools used for internal data management as well as the distribution of information to the scientific community. Technical descriptions must be sufficiently detailed to allow adequate review by informatics experts. All data must be released to the public in an accessible and useable form. If a new database is to be developed, a plan for its long-term maintenance must be described.
- **Roles of Participants**: For multi-investigator projects, an indication of each investigator's role should be described at appropriate points in the project description. A table summarizing the role of each investigator in the proposed activities would greatly facilitate the reviewers' understanding of how the proposed project makes a coherent whole that is greater than the sum of its parts.
- **Training and Diversity**: Explain how students will be broadly trained in plant genomics and how the training component will be integrated into the overall project. Describe a plan to promote involvement of members of under-represented groups in the proposed project.
- **Service Component**: If the proposal includes a service component such as a multi-user facility, describe how activities within the facility will be managed, how quality will be controlled, how community input will be solicited, and what methods will be used to make the community aware of the service to be rendered. The plan should also document institutional commitment to the facility, user fees, and plans for long-term support.

Appendix Materials:

Include the following Appendix materials in addition to the 20 page Project Description. Appendix materials should be clearly labeled and included within the same PDF file as the 20 page Project Description.

(A-1) Current Activities: Each PI and Co-PI must provide a single-page description of the relationship between the proposed project and current research activities in his/her laboratory. This page replaces the "Results of Prior Support" section normally found in NSF proposals.

(A-2) Intellectual Property: Describe in 1-3 pages the management of intellectual property rights related to the proposed project, including plans for sharing data, information, and materials resulting from the award. This plan should be specific about the nature of the results to be shared, the timing and means of release, and any constraints on release.

(A-3) Management Plan: Each project involving multiple investigators must provide an additional description of the management plan for coordinating activities of the group. This description should be 2-3 pages and should include plans for recruiting and training students and postdoctal fellows, evaluating and assessing progress, allocating funds and personnel, and interacting with scientific collaborators.

(A-4) Coordination with Outside Groups: If the proposed activity is part of a national or international collaborative project, describe the relationship of the proposed activity to the overall collaborative project and how the components will be coordinated.

Budget (NSF Form 1030):

Provide a summary budget and a yearly budget for the duration of the proposed project. When subawards are involved, summary and yearly budgets are required for each subaward. An itemized budget for the entire group should be included in the summary budget justifications.

BIO Proposal Classification Form (PCF):

Complete the BIO PCF, available on the NSF FastLane system. The PCF is an on-line coding system that allows the Principal Investigator to characterize his/her project when submitting proposals to the Directorate for Biological Sciences. Once a PI begins preparation of his/her proposal in the NSF FastLane system and selects a division, cluster, or program within the Directorate for Biological Sciences as the first or only organizational unit to review the proposal, the PCF will be generated and available through the Form Selector screen. Additional information about the BIO PCF is available in FastLane at http://www.fastlane.nsf.gov/a1/BioInstr.htm.

Special Information and Supplementary Documentation:

In addition to the applicable items described in *GPG* (Chapter II, Section D, Item 10 "Special Information and Supplementary Documentation"), a conflict of interest document should be sent directly to the Plant Genome Research Program within a week after submitting the proposal via FastLane. The list should include conflicts of interest for all senior personnel (PI and Co-PI's) and any named personnel whose salary is requested in the project budget. Conflicts to be identified are: (1) Ph.D. thesis advisor or advisee, (2) postdoctoral advisor or advisee, (3) collaborators or co-authors for the past 48 months, and (4) any other individual or institution with which the investigator has financial ties. Organize the information as shown in the table below.

Name of person with conflict	Institution	Nature of conflict

of interest (in alphabetical order)		
Alastname, firstname	Univ of Aexample	CoPI X's thesis advisor
Blastname, firstname	Univ of Bexample	PI's postdoctoral fellow
Clastname, firstname	Univ of Cexample	CoPI Y's collaborator
Dlastname, firstname	Dexample Univ	PI's thesis advisor

B. Letters of Intent and Proposal Due Dates

Letters of Intent must be received at NSF by December 4, 1998. Letters of Intent can be faxed to (703)306-0339, e-mailed to dbipgr@nsf.gov, or mailed to the Plant Genome Research Program, Division of Biological Infrastructure, National Science Foundation, 4201 Wilson Boulevard, Room 615, Arlington, VA 22230.

Full proposals must be sent by 5:00 p.m., submitter's local time, January 29, 1999 via the NSF FastLane system.

Mail the following materials directly to the Plant Genome Research Program

- a paper copy of the cover sheet, including the certification page (page 2 of 2) signed by the PI(s) and an institutional representative;
- the BIO classification form; and
- Special Information and Supplementary Documentation (including information on conflicts of interests.

Unless requested by NSF, additional information may not be sent following proposal submission.

The mailed materials must be received by February 5, 1999. Send materials to:

Plant Genome Research Program -- NSF 99-13
Division of Biological Infrastructure
National Science Foundation
4201 Wilson Boulevard
Room 615
Arlington, VA 22230

C. FastLane Submission

In order to use NSF FastLane to prepare and submit a proposal, you must have the following software: Netscape Navigator 3.0 or above, or Microsoft Internet Explorer 4.01 or above; Adobe Acrobat Reader 3.0 or above for viewing PDF files; and Adobe Acrobat 3.X or Aladdin Ghostscript 5.10 or above for converting files to PDF.

To use FastLane to prepare the proposal your institution needs to be a registered FastLane institution. A list of registered institutions and the FastLane registration form are located on the

FastLane Home Page. To register an organization, authorized organizational representatives must complete the registration form. Once an organization is registered, PIN for individual staff are available from the organization's sponsored projects office.

To access FastLane, go to the NSF Web site at http://www.nsf.gov, then select "FastLane," or go directly to the FastLane home page at http://www.fastlane.nsf.gov/. Please see "Instructions for Preparing and Submitting a Proposal to the NSF Directorate for Biological Sciences" located at http://www.fastlane.nsf.gov/a1/BioInstr.htm. Additionally, read the "PI Tipsheet for Proposal Preparation" and the "Frequently Asked Questions about FastLane Proposal Preparation," accessible at https://www.fastlane.nsf.gov/a1/A1Prep.htm.

IMPORTANT NOTE: For technical assistance with FastLane, please send an e-mail message to biofl@nsf.gov. If you have inquiries regarding other aspects of proposal preparation or submission, please send an e-mail message to dbipgr@nsf.gov before the deadline date for submission.

VI. MERIT REVIEW

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Special care is taken to ensure that reviewers have no immediate and obvious conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority serving institutions, adjacent disciplines to that principally addressed in the proposal, first time NSF reviewers, etc.

Proposals will be reviewed against the following general merit review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgments.

1. What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field and across different fields? How well qualified is the proposer (individual or team) to conduct the project? To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

2. What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching,

training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

In addition, reviewers will focus on the following issues:

- potential to advance plant genome research in the US;
- potential of the proposed project to increase the understanding of fundamental life processes in plants;
- potential impact of the proposed project on development of improved, economically significant plants or of value-added plant-based products;
- effectiveness of the organizational and research plans to integrate technical advances and new scientific opportunities;
- soundness of the information-sharing plan and management of intellectual property rights;
- quality of the training environment for junior scientists;
- commitment to promote participation of members of under-represented groups.

Where relevant, reviewers will also consider:

- cohesiveness of the planned coordination for multi-investigator projects;
- efficiency of the proposed approach to infrastructure development;
- management plan for community service functions.

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learner perspectives. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports. PIs should address this issue in their proposal to provide reviewers with the information necessary to respond fully to both NSF merit review criteria. NSF staff will give it careful consideration in making funding decisions.

B. Review Protocol and Associated Customer Service

Most proposals submitted to the NSF are reviewed by mail review, panel review, or some combination of mail and panel review. Selection of awards for this announcement will be based on merit review by scientific experts using both mail and panel reviews.

Proposals submitted to this activity will be sent to panelists for evaluation. Panelists will be asked to formulate a recommendation to either support or decline each proposal. A Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation. In most cases, proposers will be contacted by the Program Officer after his or her recommendation to award or decline funding has been approved by the Division Director. This informal notification is not a guarantee of an eventual award. NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals in this category. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after final programmatic approval has been obtained, the recommendation then goes to the Division of Grants and Agreements for review of business, financial and policy implications and the processing and issuance of grant or other agreement. Proposers are cautioned that only a Grants Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with an NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants Officer does so at its own risk.

GRANT AWARD AND ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made ***to the submitting organization*** by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator.

B. Grant Award Conditions

Grants awarded as a result of this announcement are administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions," or FDP-III, "Federal Demonstration Project General Terms and Conditions," or "Cooperative Agreement General Terms and Conditions" depending on the grantee organization. Copies of these documents are available at no cost from the NSF Clearinghouse, P.O. Box 218, Jessup, Maryland 20794-0218, telephone (301) 947-2722, or via e-mail to pubs@nsf.gov. More comprehensive information is contained in the

NSF *Grant Policy Manual* (NSF 95-26), available on the NSF OnLine Document System located at http://www.nsf.gov/, or for sale through the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after expiration of a grant, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented a new electronic project reporting system, available through FastLane, which permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; publications; and other specific products and contributions. Reports will continue to be required annually and after the expiration of the grant, but PIs will not need to re-enter information previously provided, either with the proposal or in earlier updates using the electronic system.

Effective October 1, 1998, PIs are required to use the new reporting format for annual and final project reports. PIs are strongly encouraged to submit reports electronically via FastLane. For those PIs who cannot access FastLane, paper copies of the new report formats may be obtained from the NSF Clearinghouse as specified above. NSF expects to require electronic submission of all annual and final project reports via FastLane beginning in October, 1999.

D. New Awardee Information

If the submitting organization has never received an NSF award, it is recommended that the organization's appropriate administrative officials become familiar with the policies and procedures in the NSF *Grant Policy Manual* which are applicable to most NSF awards. The "Prospective New Awardee Guide" (NSF 97-100) includes information on: Administration and Management Information; Accounting System Requirements and Auditing Information; and Payments to Organizations with Awards. This information will assist an organization in preparing documents that NSF requires to conduct administrative and financial reviews of an organization. The guide also serves as a means of highlighting the accountability requirements associated with Federal awards. This document is available electronically on NSF's Web site at http://www.nsf.gov/cgi-bin/getpub?nsf97100.

GENERAL INFORMATION

The National Science Foundation (NSF) funds research and education in most fields of science

and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers, and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF. Some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (NSF 91-54) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090; FIRS at 1-800-877-8339.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees to provide or obtain data regarding the proposal-review process, award decisions, or the administration of awards; to government contractors, experts, volunteers, and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 *Federal Register* 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 *Federal Register* 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Reports Clearance Officer; Information Dissemination Branch, DAS; National

Science Foundation; Arlington, VA 22230.

The program described in this announcement is in the category 47.074 (BIO) of the Catalog of Federal Domestic Assistance.

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF-funded activity. Information concerning Year 2000 activities can be found on the NSF Web site at http://www.nsf.gov/oirm/y2k/start.htm.

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NSF 99-13 (Replaces 98-30)